Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA– SEMESTER –IV EXAMINATION –SUMMER-2019

Subject Code:4649301   **Date:** 14-05-2019
Subject Name: Computer Networking
Time:10.30 am to 1.00 pm   **Total Marks: 70**
Instructions:
   1. **Attempt all questions.**
   2. **Make suitable assumptions wherever necessary.**
   3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Explain OSI reference model with brief functionality of each layer.	**07**
	(b)	Write the answer in brief.	
		1. Explain Local Area Network.	**04**
		2. Differentiate connection-oriented and connectionless services.	**03**
Q.2	**(a)**	Explain coaxial cable with diagram.	**07**
	(b)	Write the answer in brief.	
		1. Explain ARPANET.	**04**
		2. Compare full-duplex and half-duplex communication.	**03**

OR

	(b)	Write the answer in brief.	
		1. Differentiate multimode and single mode fiber.	**04**
		2. Compare fiber optics and copper wire.	**03**
Q.3	**(a)**	Explain Pass band transmission.	**07**
	(b)	Write the answer in brief.	
		1. How OFDM is better compare to FDM.	**04**
		2. Calculate CRC for frame 1101011111 using Generator 10011	**03**

OR

Q.3	**(a)**	What is framing techniques? Explain Byte stuffing with appropriate example.	**07**
	(b)	Write the answer in brief.	
		1. What is piggybacking?	**04**
		2. What is sliding window? What is the relevance of sending window?	**03**
Q.4	**(a)**	Explain carrier sense multiple access protocol.	**07**
	(b)	Write the answer in brief.	
		1. Draw and explain 802.11 protocol stacks.	**04**
		2. Define term TSAP and NSAP.	**03**

OR

Q.4	**(a)**	Explain hidden terminal and exposed terminal problem. How RTS and CTS help to resolve the problem?	**07**
	(b)	Write the answer in brief.	
		1. Explain store and forward packet switching.	**04**
		2. Explain optimality principle.	**03**

Q.5	(a)	Explain Distance Vector routing with count-to-infinity problem.	07
	(b)	Write the answer in brief.	
		1. Compare virtual circuit and datagram networks.	04
		2. Explain TCP connection establishment.	03

OR

Q.5	(a)	What is domain resource record? Explain DNS resource record types.	07
	(b)	Write the answer in brief.	
		1. What is remote procedure call? Write the steps to make remote procedure call.	04
		2. What is cumulative acknowledgement? Explain with appropriate example.	03

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